

CLAIMS

WHAT IS CLAIMED:

- Sub 317
a 5
1. A method, comprising:
establishing a communication channel between a first ~~modem~~ ^{transceiver and a} second transceiver in
low power mode;
determining a training parameter using the communication channel; and
performing training in response to determining the training parameter.
- 10 2. The method of claim 1, further including providing the training parameter to
the second transceiver.
- 15 3. The method of claim 1, wherein establishing the channel includes establishing
the channel with the smallest amount of power acceptable.
4. The method of claim 1, wherein the low power mode includes a cutback in the
range of 0-30 dB.
- 20 5. The method of claim 1, wherein determining the training parameter includes
determining a phase distortion of the communication channel.
6. The method of claim 1, wherein determining the training parameter includes
determining an amplitude distortion of the communication channel.

7. The method of claim 1, wherein determining the training parameter includes determining a transmitter characteristic of the second transceiver using the communication channel.

5 8. The method of claim 7, wherein the transmitter characteristic of the second transceiver includes determining a symbol timing of the transmitter.

9. The method of claim 7, wherein the transmitter characteristic of the second transceiver includes determining a carrier frequency of the transmitter.

10 10. The method of claim 7, wherein the transmitter characteristic of the second transceiver includes determining a carrier phase of the transmitter.

11 11. The method of claim 1, further including providing a training parameter to the first transceiver by the second transceiver.

12. An apparatus for communicating with a transceiver, comprising:
a first logic being capable of establishing a communication channel with the transceiver in a low power mode; and
20 a second logic being capable of:
determining a training parameter using the communication channel; and
providing the training parameter to the transceiver.

13. The apparatus of claim 12, further including a third logic being capable of
25 transmitting and receiving data with the transceiver.

a 14. The apparatus of claim 13, wherein the first logic is capable of establishing the channel with the smallest amount of power acceptable.

5 15. The apparatus of claim 13, wherein the low power mode includes a cutback in the range of 0-30 dB.

10 16. The apparatus of claim 13, wherein the second logic being capable of determining the training parameter includes the second logic being capable of determining a phase distortion of the communication channel.

15 17. The apparatus of claim 16, wherein the second logic being capable of determining the training parameter includes the second logic being capable of determining an amplitude distortion of the communication channel.

18. The apparatus of claim 17, wherein the second logic being capable of determining the training parameter includes the second logic being capable of determining a transmitter characteristic of the second transceiver using the communication channel.

20 19. The apparatus of claim 18, wherein the transmitter characteristic of the second transceiver includes determining a carrier frequency of the transmitter.

25 20. The apparatus of claim 19, wherein the transmitter characteristic of the second transceiver includes determining a carrier phase of the transmitter.

21. A system, comprising:

a first transceiver; and

a second transceiver, comprising:

a first logic being capable of establishing a communication channel with the

first transceiver in a low power mode; and

a second logic being capable of:

determining the training parameter using the communication channel;

and

providing the training parameter to the first transceiver.

22. The system of claim 21, wherein the first transceiver is a DSL modem.

23. The system of claim 22, wherein the second transceiver is a DSL modem.

24. The system of claim 23, wherein the first logic is capable of establishing the channel with the smallest amount of power acceptable.

25. The system of claim 23, wherein the second logic being capable of determining the training parameter includes the second logic being capable of determining at least one of phase distortion and amplitude distortion of the communication channel.

26. The system of claim 25, wherein the second logic being capable of determining the training parameter includes the second logic being capable of determining a transmitter characteristic of the second transceiver using the communication channel.

27. The system of claim 26, wherein the transmitter characteristic of the first transceiver includes determining at least one of carrier frequency, carrier phase, and symbol timing of the transmitter.

5 28. An apparatus, comprising
a means for establishing a communication channel between a first ~~transceiver~~ ^{transceiver and a} ~~modem~~ ¹ second trans-
ceiver in low power mode;
means for determining training parameters using the communication channel; and
means for providing the training parameters to the second transceiver.

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